

U. S. ENVIRONMENTAL PROTECTION AGENCY  
UNDERGROUND INJECTION CONTROL PERMIT  
AUTHORIZATION TO OPERATE A CLASS II INJECTION WELL  
EPA UIC PERMIT NUMBER KYI0458

Pursuant to the Underground Injection Control regulations of the U.S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 146 and 147,

First South Energy Corporation  
W239 N332 Pewaukee Road  
Waukesha, WI 53188

is hereby authorized to convert, operate, and plug and abandon the following Class II enhanced recovery injection well:

M. J. Spurlock #1  
Lakeville Field  
Mogiffin County, Kentucky  
2680' FSL x 950' FWL of Carter Coordinate 7-0-78

This authorization is in accordance with the limitations, monitoring requirements and other conditions set forth herein. This permit consists of this cover sheet; Part I, 6 pages; and Part II, 13 pages.

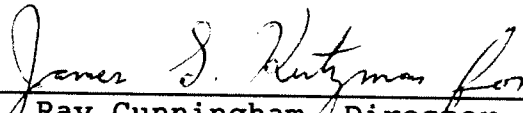
All references to Title 40 of the Code of Federal Regulations are to regulations that are in effect on the date that this permit becomes effective.

This permit shall become effective on JAN 28 1991.

This permit and the authorization to inject shall remain in full force and effect during the operating life of the well, unless this permit is otherwise modified, revoked and reissued, terminated, or a minor modification is made as provided at 40 C.F.R. §§144.39, 144.40 and 144.41. This permit shall be reviewed at least once every five years from the effective date.

JAN 28 1991

\_\_\_\_\_  
Date

  
\_\_\_\_\_  
W. Ray Cunningham, Director  
Water Management Division  
U.S. Environmental Protection Agency  
Region IV

PART I

WELL SPECIFIC CONDITIONS

SECTION A. CONSTRUCTION REQUIREMENTS

1. Casing and Cementing

The permittee shall case and cement the well and maintain all casing and cement so as to prevent the movement of fluids into or between underground sources of drinking water. The casing and cement used in the construction of the well shall be designed for the life expectancy of the well. Conversion of this well shall be performed as specified in Attachments L & M of the permit application.

2. Tubing and Packer

Injection may only take place through tubing with a packer set within the casing no higher than 1100 feet below land surface. The tubing and packer shall be maintained in a manner which is compatible with the injection operation specified in Part I, Section B, and to prevent the movement of fluids into or between underground sources of drinking water.

3. Logs, Tests and Reports

The following tests and reports shall be prepared and submitted to EPA to demonstrate mechanical integrity:

- (a) A demonstration of the mechanical integrity of the well is required before injection can be authorized. The demonstration will consist of a pressure test on the tubing/casing annulus to at least 300 psig with less than three (3%) percent pressure loss in thirty (30) minutes. The permittee shall contact EPA to arrange a date to conduct this test. A representative of EPA will be present to witness this test. If the well fails the test, the permittee shall not commence injection operations until the problem is corrected and mechanical integrity can be demonstrated.

- (b) The permittee shall prepare a report, including process results, of the testing programs. The report shall be submitted in accordance with Part I, Section E, item 4 and shall be signed in accordance with Section E, item 11 of this permit.

4. Commencing Injection

The well authorized by this permit may not commence injection until:

- (a) Conversion is complete, and the permittee has submitted to the Director, by Certified Mail with return receipt requested, a notice of completion using EPA Form 7520-10, and either:
- (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or
  - (ii) The permittee has not received, within 13 days of the date of the Director's receipt of the notice required above, notice from the Director of his or her intent to inspect or otherwise review the new injection well, in which case prior inspection or review is waived and the permittee may commence injection.
- (b) The permittee has demonstrated to EPA that the injection well has mechanical integrity, and has submitted the reports as specified in Part I, Section A, item 3.

SECTION B. OPERATING REQUIREMENTS

1. Injection Operation

Beginning on the date that Part I, Section A, item 4 is completed and lasting through the term of this permit, the permittee is authorized to inject only fluids brought to

the surface in connection with conventional oil and natural gas production from the permittee's operations in the Lakeville Field for enhanced recovery operations under the following conditions:

(a) Injection Zone

Injection shall be limited to the Weir Sand in the perforated interval between 1146 feet and 1194 feet below land surface.

(b) Injection Pressure Limitation

- (i) Injection pressure shall not initiate fractures or propagate existing fractures in the injection zone. The maximum allowable wellhead injection pressure for the injection well will initially be established at 700 psig. If the permittee wishes to inject above 700 psig, it shall be proven through the use of a step-rate injectivity test, that such additional pressure will not fracture the injection zone. Upon approval by the Director, the permittee may inject at the maximum pressure attained during any step-rate test conducted on an injection well authorized by this permit provided the test proved such pressure will not fracture or extend fractures in the injection zone. Step-rate injectivity test procedures must be approved by the Director prior to conducting the test and the test may be witnessed by EPA or an agent designated by EPA.
- (ii) Injection at a pressure which initiates or propagates fractures in the confining zone or causes the movement of injection or formation fluids into an underground source of drinking water is prohibited.
- (iii) Injection between the outermost casing protecting underground sources of drinking water and the well bore is prohibited.

2. Annulus Operation

The annulus between the tubing and the long-string casing shall be filled with freshwater or other fluid as approved by the Director. The annulus pressure shall be maintained at 0 psig.

The annulus shall be monitored with a gauge designed to indicate both a vacuum (below atmospheric) and positive pressure (above atmospheric). The permittee shall comply with Part I, Section B, item 3 when a change in the annulus pressure of 15 psig occurs. The permittee shall provide an explanation to the Director for the change in pressure, and

measures that will be taken to restore annulus pressure to achieve compliance with this section. If the cause of annulus pressure change is not corrected within 48 hours, the permittee shall cease injection unless such order to cease operation is waived by the Director.

3. Loss of Mechanical Integrity During Operation

The permittee shall cease injection if a loss of mechanical integrity as defined at 40 C.F.R. §146.8 becomes evident during operation. Operation shall not be resumed until the permittee has complied with the provisions of Part II, Section G, of this permit regarding mechanical integrity demonstration and testing.

The permittee shall notify the Director of the loss of mechanical integrity in accordance with the reporting procedures in Part II, Section E, item 12(d).

SECTION C. MONITORING REQUIREMENTS

1. Sampling and Analysis Methods

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Grab samples shall be used for the laboratory analysis of the physical and chemical characteristics as specified in Part I, Section C, item 3(a). Test methods and procedures shall be as specified at 40 C.F.R. §136.3 or 40 C.F.R. Part 261, Appendix III. When the analytical method for a particular parameter is not specified at either 40 C.F.R. §136.3 or 40 C.F.R. Part 261, Appendix III, the permittee must obtain the Director's approval of the method used. The permittee shall identify the types of tests and methods used to generate all monitoring data. Reports to be generated from monitoring data are specified in Part I, Section D.

2. Injection Operation Monitoring

The permittee shall monitor the operation of the injection well as follows:

<u>Parameter</u>	<u>Monitoring Frequency</u>
Injection Pressure (psig) at Wellhead	Weekly
Annulus Pressure (psig) at Wellhead	Weekly
Flow Rate (barrels/day) of Injected Fluid	Weekly
Cumulative Volume (barrels) of Injected Fluid	Weekly

Observation and recording of injection pressure, annulus pressure, flow rate and cumulative volume shall be made over equal time intervals beginning on the date on which the well commences operation. Recordings shall be of representative values.

3. Injection Fluid Analysis

The permittee shall conduct an injection fluid analysis at least once every twelve months and whenever changes are made to the injection fluid. Analyses shall be made beginning within twelve months from the effective date of this permit, or twelve months from the most recent analysis, whichever is later. An analysis must include:

- (a) pH, total dissolved solids, and specific gravity; and
- (b) a list of all chemicals and their composition used for any well stimulation and fracturing during that sampling year; and a list of any additives used and their chemical composition, including any inhibitors used to prevent scaling, corrosion, or bacterial growth. These lists should indicate the brand name of the product and the manufacturer.

On the written request of EPA, an injection fluid analysis shall include the following additional constituents: barium, calcium, total iron, magnesium, sodium, bicarbonate, carbonate, chloride, sulfate, carbon dioxide, dissolved oxygen, hydrogen sulfide, and purgeable aromatic hydrocarbons.

SECTION D. REPORTING REQUIREMENTS

1. Reports on Well Tests and Workovers

Within ninety (90) days after the completion of the activity, the permittee shall report to the Director the results of the following:

- (a) Mechanical integrity tests, other than those specified in Part I, Section A, item 3; and
- (b) Any well workover, logging or other test data, other than those specified in Part I, Section A, item 3, revealing downhole conditions.

2. Reporting of Monitoring Results

Monitoring results, as specified in Part I, Section C, shall be reported each year on EPA Form 7520-11 and must be postmarked by the 28th day of the month following the first full year after the effective date of this permit.

Copies of the monitoring results required by Part I, and all other reports required by Part II, shall be submitted to the Director at the following address:

U. S. Environmental Protection Agency  
Region IV, Water Management Division  
Ground-Water Protection Branch  
Underground Injection Control Section  
345 Courtland Street, NE  
Atlanta, Georgia 30365

3. Reporting of New Wells Drilled Within the Area of Review (AOR)

Within ten (10) days after spud date, the permittee shall report to the Director by certified mail, return receipt requested, the construction plans for any new well within the AOR of the permitted facility that will penetrate the confining zone or injection zone. The permittee shall provide information on proposed construction (including location and quantities of cement), location and depth. This requirement applies to any construction activity regardless of ownership of the well.

If the construction of the new well will not protect USDWs from contamination, the Director may terminate the permit under 40 CFR §144.40(a)(3) if he or she determines that continued injection may endanger human health or the environment.

SECTION E. PLUGGING AND ABANDONMENT PLAN

Plugging and abandonment of the permitted injection well shall be in accordance with Part II, Section F of this permit and 40 C.F.R. §146.10.

The plugging of this injection well shall be performed in the manner described below:

1. Pull tubing and packer from well.
2. Place cement plug from TD to surface.
3. Cut 4 1/2" casing below plow depth, weld steel plate on, and restore site.

Note: Well will be placed in static equilibrium prior to placing cement plug.

PART II  
GENERAL PERMIT COMPLIANCE

A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. The permittee, authorized by this permit, shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 142 or may otherwise adversely affect the health of persons. Any underground injection activity not specifically authorized in this permit is prohibited. Compliance with this permit does not constitute a defense to any action brought under the SDWA, or any other common or statutory law or regulation. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Nothing in this permit shall be construed to relieve the permittee of any duties under applicable regulations.

B. PERMIT ACTIONS

1. Modification, Revocation, Reissuance and Termination. The Director may, for cause or upon request from the permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR §§ 144.12, 144.39, and 144.40, including but not limited to the following:

- (a) Alterations. There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in this permit.
- (b) Information. The Director has received information which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance.



- (c) New regulations. The standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.
- (d) Compliance schedules. The Director determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy.
- (e) Proposed transfer. The Director receives notification of a proposed transfer of the permit.
- (f) Noncompliance. Noncompliance by the permittee with any condition of the permit.
- (g) Relevant facts. The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time.
- (h) Endangerment. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.

Also, the permit is subject to minor modifications for cause as specified in 40 CFR §144.41. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes, or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any permit condition.

The submittal of an updated application may be required prior to the Director granting a request for permit modification.

2. Transfer of Permits. This permit is not transferable to any person except after notice to and approval by the Director, and in compliance with the requirements and conditions of 40 CFR §144.38.

The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act.

This permit may be transferred to a new owner or operator by modification according to 40 CFR §144.41(d), if the Director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Director.

C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 and §144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- 1) The name and address of the permittee;
- 2) Information which deals with the existence, absence or level of contaminants in drinking water.

E. DUTIES AND REQUIREMENTS

1. Duty to Comply. The permittee shall comply with all applicable UIC Program regulations and conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit issued in accordance with 40 CFR §144.34. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. Such non-compliance may also be grounds for enforcement action under RCRA.

2. Penalties for Violations of Permit Conditions. Any person who violates a permit requirement is subject to civil penalties, fines, and other enforcement action under the SDWA and may be subject to such actions pursuant to RCRA. Any person who willfully violates permit conditions may be subject to criminal prosecution.
3. Continuation or Expiring Permits.
  - (a) Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must submit a complete application for a new permit at least 180 days before this permit expires.
  - (b) Permit Extensions. The conditions of an expired permit may continue in force in accordance with 5 U.S.C. 558(c) until the effective date of a new permit, if:
    - (1) The permittee has submitted a timely application which is a complete application for a new permit; and
    - (2) The Director, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit, and
    - (3) The new permit has not been denied, or if a denial has been appealed, final agency action has not occurred in accordance with 40 CFR §124.19(f)(1).
  - (c) Effect. Permits continued under 5 U.S.C. 558(c) remain fully effective and enforceable.
  - (d) Enforcement. When the permittee is not in compliance with the conditions of the expiring or expired permit the Director may choose to do any or all of the following:
    - (1) Initiate enforcement action based upon the permit which has been continued;

- (2) Issue a notice of intent to deny the new permit. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;
  - (3) Issue a new permit under 40 CFR Part 124 with appropriate conditions; or
  - (4) Take other actions authorized by Underground Injection Control regulations.
- (e) State Continuation. An EPA issued permit does not continue in force beyond its expiration date under Federal law if at that time a State has primary enforcement authority. A State authorized to administer the UIC program may continue either EPA or State-issued permits until the effective date of the new permits, if State law allows. Otherwise, the facility or activity is operating without a permit from the time of expiration of the old permit to the effective date of the State-issued new permit.
- 4. Need to Halt or Reduce Activity not a Defense. It shall not be a defense, for permittee in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
  - 5. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.
  - 6. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit.

7. Duty to Provide Information. The permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.
8. Inspection and Entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:
  - (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit;
  - (b) Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
  - (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - (d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by SDWA, any substances or parameters at any location.
9. Records.
  - (a) The permittee shall retain records and all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit for a period of at least five years from the date of the sample, measurement or report.
  - (b) The permittee shall maintain records of all data required to complete the permit application form for this permit and any supplemental information submitted under 40 CFR §144.31 for a period of at least five years from the date the application was signed. These periods may be extended by request of the Director at any time.

- (c) The permittee shall retain records concerning the nature and composition of all injected fluids until three years after the completion of plugging and abandonment which has been carried out in accordance with the attached plugging and abandonment plan, and is consistent with 40 CFR §146.10.
  - (d) The permittee shall continue to retain such records after the retention period specified by paragraphs (a) to (c) above, unless he delivers the records to the Director or obtains written approval from the Director to discard the records.
  - (e) Records of monitoring information shall include:
    - (1) The date, exact place, and time of sampling or measurements;
    - (2) The individual(s) who performed the sampling or measurements;
    - (3) A precise description of both sampling methodology and the handling (custody) of samples;
    - (4) The date(s) analyses were performed;
    - (5) The names of individual(s) who performed the analyses;
    - (6) The analytical techniques or methods used; and
    - (7) The results of such analyses.
10. Monitoring. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Monitoring results shall be reported at the intervals specified in Part I of this permit.
11. Signatory Requirements.
- (a) All reports or other information, required to be submitted by this permit or requested by the Director, shall be signed and certified in accordance with 40 CFR §144.32, as follows:

- (1) For a corporation: by a responsible corporate officer. For the purpose of this permit, a responsible corporate officer means: (1) a president, secretary, treasurer or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy - or decision making functions for the corporation, or (2) the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding 25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporation procedures.
  - (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
  - (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official: or
  - (4) A duly authorized representative.
- (b) A person is a duly authorized representative only if:
- (1) The authorization is made in writing by a person described above;
  - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
  - (3) The written authorization is submitted to the Director.
- (c) If an authorization under paragraph (b) above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a

new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

- (d) Any person signing a document under paragraphs 11(a) or 11(b) of this Section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

12. Reporting Requirements.

- (a) Planned Changes. The permittee shall give written notice to the Director, as soon as possible, of any planned physical alterations or additions to the permitted facility.
- (b) Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 30 days following each schedule date.
- (d) Twenty-four Hour Reporting.
- (1) The permittee shall report to the Director any non-compliance which may endanger health or the environment. Any information shall be provided orally



within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which must be reported orally within 24 hours:

- (i) Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water.
  - (ii) Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between underground sources of drinking water.
- (2) A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- (e) Other Non-Compliance. The permittee shall report all other instances of noncompliance not otherwise reported at the time monitoring reports are submitted. The reports shall contain the information listed in Part II, Section E, Item 12(d)(2) above.
- (f) Other Information. When the permittee becomes aware that he failed to submit any relevant facts in the permit application or submitted incorrect information in a permit application or in any report to the Director, the permittee shall submit such facts or information within 10 days.

#### F. PLUGGING AND ABANDONMENT

1. Notice of Plugging and Abandonment. The permittee shall notify the Director no later than 45 days before conversion or abandonment of the well. The Director may allow a shorter notice period upon written request.

2. Plugging and Abandonment. The permittee shall plug and abandon the well consistent with 40 CFR § 146.10, as provided for in the plugging and abandonment plan incorporated as a part of this permit. Plugging and abandonment shall be completed to ensure that fluids are not allowed to move either into a USDW or from one USDW to another.

Revisions to the Plugging and Abandonment Plan must be submitted to the Director no less than 45 days prior to plugging and abandonment. The Director must approve the revisions prior to the start of plugging operations.

Within 60 days after plugging a well, or at the time of the next quarterly report (whichever is shorter), the permittee shall submit a report to the Director which includes all supporting documentation such as logs and test results. The report shall be certified as accurate by the person who performed the plugging operation, and shall consist of either:

- (a) A statement that the well was plugged in accordance with the plan previously submitted to the Director; or
  - (b) If the actual plugging differed from the approved plan, a statement defining the actual plugging and why the Director should approve such deviation. Any deviation from a previously approved plan may be cause for the Director to require the operator to replug the well.
3. Inactive Wells. After a cessation of injection for two years the permittee shall plug and abandon the well in accordance with the plan unless he:
  - (a) Provided notice to the Director including a demonstration that the well will be used in the future; and
  - (b) Described actions or procedures, which are deemed satisfactory by the Director, that the permittee will take to ensure that the well will not endanger USDWs during the period of temporary abandonment. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived, in writing, by the Director.

G. MECHANICAL INTEGRITY

1. Standards. All injection well(s) must have and maintain mechanical integrity consistent with 40 CFR §146.8.
2. Prohibition Without Demonstration. The permittee shall not commence or continue injection activity after the effective date of this permit unless the permittee has demonstrated that the well covered by this permit has mechanical integrity in accordance with 40 CFR §146.8 and the permittee has received written notice from the Director that such demonstration is satisfactory.
3. Subsequent Mechanical Integrity Demonstrations. A demonstration of mechanical integrity in accordance with 40 CFR §146.8 shall be made no later than five years from the date of the last approved demonstration. Mechanical integrity shall also be demonstrated any time the tubing is removed from the well, the packer is reset, or a loss of mechanical integrity becomes evident during operation. Furthermore, the Director may by written notice require the permittee to demonstrate mechanical integrity at any time. The permittee shall notify the Director of his intent to demonstrate mechanical integrity at least 30 days prior to such demonstration. The Director may allow a shorter time period if it would be sufficient to enable EPA to adequately respond. The permittee shall report the results of a mechanical integrity demonstration within 90 days after completion and in accordance with Part II, Section E, item 11.
4. Loss Of Mechanical Integrity. If the permittee or the Director finds that the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity as defined by 40 CFR §146.8 becomes evident during operation, the injection operation shall be halted immediately and shall not be resumed until the Director gives approval to recommence injection.
5. Test Methods to be Used for Mechanical Integrity Test (MIT). A plan for logging and testing the well for mechanical integrity shall be prepared and submitted for the Director's approval at least 60 days prior to each proposed MIT demonstration date. The Director may allow a shorter time period if it would be sufficient to enable EPA to adequately respond.

The plan shall propose logs and tests specified in 40 CFR §146.8 (as amended from time to time by EPA to include additional approved logs and tests, as published in the Federal Register). The plan shall also propose standards that will be used for evaluating the results of logging and testing. Mechanical integrity will be confirmed if the well logs and test data meet or exceed the standards approved as a result of the Director's review of the plan.

#### H. FINANCIAL RESPONSIBILITY

1. Financial Responsibility. The permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). The permittee shall not substitute an alternative demonstration of financial responsibility from that which the Director has approved, unless he has previously submitted evidence of that alternative demonstration to the Director and the Director notifies him that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect inflation of such costs and a revised demonstration of financial responsibility, if necessary.
2. Insolvency. In the event of:
  - (a) the bankruptcy of the trustee or issuing institution of the financial mechanism, or
  - (b) suspension or revocation of the authority of the trustee institution to act as trustee, or
  - (c) the institution issuing the financial mechanism loses its authority to issue such an instrument, the permittee must notify the Director, within ten (10) business days. The owner or operator must establish other financial assurance or liability coverage acceptable to the Director, within 60 days after such an event.

An owner or operator must also notify the Director by certified mail of the commencement of voluntary OR INVOLUNTARY proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within 10 business days after the commencement of the proceeding. A guarantor of a corporate guarantee must make such a notification if he is named as debtor, as required under the terms of the guarantee.

#### I. DEFINITIONS

All terms used in this permit, if not specifically defined in the permit, are defined at 40 C.F.R. Parts 144, 145, 146 and 147.

12/20/13  
MIS 4.22.04 First South Energy Court

<b>Polu Kai Services, LLC</b> 137 North Washington Street, Suite 301 Falls Church, VA 22046 VA (703) 533-0039 KY (859) 771-5687		<b>ROUTINE INSPECTION NOTICE</b>		<b>U.S. EPA</b> Region IV 61 Forsyth St. S.W. Atlanta, GA 30303 (404) 562-9424																	
<b>REASON FOR INSPECTION</b> The purpose of inspection by the duly designated representative of the Administrator is to gather data to determine if the person, or person in charge of such, subject to the underground injection control program has acted or is acting in compliance with Section 1445 of the SDWA 42 U.S.C. §300J-4(b). See reverse for quotes of Section 1445 of the SDWA 42 U.S.C. §300J-4(b)(1) and §300J-4(c).																					
OPERATOR		First South Energy		EPA ID NUMBER		1530078															
CONTACT NAME				LEASE NAME / WELL #		M.J. Spurlock 1															
ADDRESS				EPA PERMIT NUMBER		KYIO458															
				STATE PERMIT NUMBER		53522															
PHONE NUMBER				DOW NUMBER		1530011															
INFORMATION ON TANK		NONE																			
<b>WELL LOCATION</b>																					
STATE		KY		LATITUDE N		37.72401															
COUNTY		Magoffin		LONGITUDE W		-83.06339															
				ELEVATION GPS		875'															
<b>WELL COMPLETION</b>																					
CLASS WELL 2 5		CASING INJECTOR YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		TUBING & PACKER YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		CASING SIZE 4 1/2		TUBING SIZE 2 3/8													
<b>OPERATIONAL DATA</b>																					
AC		SI		TA		AB		PA		CP		UC		NC		DE		AN		UK	
INJECTED FLUID		NONE		TUBING PSI		0		ANNULUS PSI		N/A		PUMP PSI		0		OPEN ANNULUS YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		ANNULUS FLUID		N/A	
GENERAL SURFACE CONDITION OF WELL SITE:						Overgrown															
ADVERSE FINDINGS / PROBLEMS / INCIDENTS ENCOUNTERED/WHO NOTIFIED? DESCRIBE:																					
Pump is Seized, one Tank is now full of holes																					
PERSONS ENCOUNTERED:																					
NAME:		CONTACT INFO:		PHONE:		EMAIL:															
NAME:		CONTACT INFO:		PHONE:		EMAIL:															
NAME:		CONTACT INFO:		PHONE:		EMAIL:															
PHOTO #1 INJECTION WELL / FOCUS OR REFERNECE WELL) : DESCRIPTION																					
PHOTO #2 (TANK BATTERY), DESCRIPTION:						GPS LOCATION															
left Tank full of holes						37.72388						-83.06347									
PHOTO #3 DESCRIPTION						GPS LOCATION															
PHOTO #4 DESCRIPTION						GPS LOCATION															
ADDITIONAL PHOTOS WITH DESCRIPTION AND GPS LOCATION:																					
OPERATOR REPRESENTATIVE						UIC INSPECTOR (Polu Kai Services, LLC)															
NAME						NAME															
SIGNATURE						SIGNATURE						C. C. [Signature]									
ADDRESS						DATE						7.25.12									
PHONE						DATE															

<b>Polu Kai Services, LLC</b> 137 North Washington Street, Suite 301 Falls Church, VA 22046 VA (703) 533-0039 KY (859) 771-5687	<b>ROUTINE INSPECTION NOTICE</b>	<b>U.S. EPA</b> Region IV 61 Forsyth St. S.W. Atlanta, GA 30303 (404) 562-9424	
<b>REASON FOR INSPECTION</b> The purpose of inspection by the duly designated representative of the Administrator is to gather data to determine if the person, or person in charge of such, subject to the underground injection control program has acted or is acting in compliance with Section 1445 of the SDWA 42 U.S.C. §300J-4(b). See reverse for quotes of Section 1445 of the SDWA 42 U.S.C. §300J-4(b)(1) and §300J-4(c).			
OPERATOR	First South Energy	EPA ID NUMBER	1530018
CONTACT NAME		LEASE NAME / WELL #	M.J. Spurlock 1
ADDRESS		EPA PERMIT NUMBER	KYI0458
		STATE PERMIT NUMBER	53522
PHONE NUMBER		DOW NUMBER	1530011
INFORMATION ON TANK		First South	
<b>WELL LOCATION</b>			
STATE	KY	LATITUDE N	37.72401
COUNTY	Magoffin	LONGITUDE W	83.06339
		ELEVATION GPS	872
<b>WELL COMPLETION</b>			
CLASS WELL	25	CASING INJECTOR	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
TUBING & PACKER	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	CASING SIZE	4 1/2
TUBING SIZE	2 3/8		
<b>OPERATIONAL DATA</b>			
AC	SI	TA	AB
PA	CP	UC	NC
DE	AN	UK	
INJECTED FLUID	Produced	TUBING PSI	N/A
ANNULUS PSI	Gas	PUMP PSI	100
OPEN ANNULUS	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	ANNULUS FLUID	Gas
GENERAL SURFACE CONDITION OF WELL SITE: Overgrown			
ADVERSE FINDINGS / PROBLEMS / INCIDENTS ENCOUNTERED/WHO NOTIFIED? DESCRIBE:			
<b>PERSONS ENCOUNTERED:</b>			
NAME:	CONTACT INFO:	PHONE:	EMAIL:
NAME:	CONTACT INFO:	PHONE:	EMAIL:
NAME:	CONTACT INFO:	PHONE:	EMAIL:
PHOTO #1 INJECTION WELL / FOCUS OR REFERNECE WELL) : DESCRIPTION			
Vines Have overtaken belts, Motor is not in Use			
PHOTO #2 (TANK BATTERY), DESCRIPTION:		GPS LOCATION	
PHOTO #3 DESCRIPTION		GPS LOCATION	
Electric Meter		2-10-10 X 4-28-10 Same Meter	
PHOTO #4 DESCRIPTION		GPS LOCATION	
ADDITIONAL PHOTOS WITH DESCRIPTION AND GPS LOCATION:			
OPERATOR REPRESENTATIVE		UIC INSPECTOR (Polu Kai Services, LLC)	
NAME		NAME	
SIGNATURE		SIGNATURE	C. Waller
ADDRESS		DATE	7.20.10
PHONE			

MIT Overdu 4.22.07

<b>Polu Kai Services, LLC</b> 137 North Washington Street, Suite 301 Falls Church, VA 22046 VA (703) 533-0039 KY (859) 771-5687		<b>ROUTINE INSPECTION NOTICE</b>		<b>U.S. EPA</b> Region IV 61 Forsyth St. S.W. Atlanta, GA 30303 (404) 562-9424	
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OPERATOR		First South Energy		EPA ID NUMBER	
CONTACT NAME				LEASE NAME / WELL #	
ADDRESS				EPA PERMIT NUMBER	
				STATE PERMIT NUMBER	
PHONE NUMBER				DOW NUMBER	
INFORMATION ON TANK		First South			
<b>WELL LOCATION</b>					
STATE		KY		LATITUDE N	
COUNTY		Magoffin		LONGITUDE W -	
				ELEVATION GPS	
<b>WELL COMPLETION</b>					
CLASS WELL	25	CASING INJECTOR	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	TUBING & PACKER	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
				CASING SIZE	4 1/2
				TUBING SIZE	2 3/8
<b>OPERATIONAL DATA</b>					
AC	SI	TA	AB	PA	CP
UC	NC	DE	AN	UK	
INJECTED FLUID	Produced	TUBING PSI	N/A	ANNULUS PSI	yes gas
				PUMP PSI	NO
				OPEN ANNULUS	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
				ANNULUS FLUID	Gas
GENERAL SURFACE CONDITION OF WELL SITE: O.K.					
ADVERSE FINDINGS / PROBLEMS / INCIDENTS ENCOUNTERED/WHO NOTIFIED? DESCRIBE:					
Tire Tracks in the grass (see photo) Leading to well					
check with (licking Valley R.E.C.C. Meter # 27383) & see					
who is paying the bill					
PERSONS ENCOUNTERED:					
NAME:		CONTACT INFO:		PHONE:	
NAME:		CONTACT INFO:		PHONE:	
NAME:		CONTACT INFO:		PHONE:	
PHOTO #1 INJECTION WELL / FOCUS OR REFERNECE WELL) : DESCRIPTION					
PHOTO #2 (TANK BATTERY), DESCRIPTION:				GPS LOCATION	
Track's in grass					
PHOTO #3 DESCRIPTION				GPS LOCATION	
Electura Meter, check against 2/10 Photo of same Meter					
PHOTO #4 DESCRIPTION				GPS LOCATION	
ADDITIONAL PHOTOS WITH DESCRIPTION AND GPS LOCATION:					
OPERATOR REPRESENTATIVE			UIC INSPECTOR (Polu Kai Services, LLC)		
NAME			NAME		
SIGNATURE			SIGNATURE		
ADDRESS			DATE		
PHONE			4.28.10		

<b>Polu Kai Services, LLC</b> 137 North Washington Street, Suite 301 Falls Church, VA 22046 VA (703) 533-0039 KY (859) 771-5687	<b>ROUTINE INSPECTION NOTICE</b>	<b>U.S. EPA</b> Region IV 61 Forsyth St. S.W. Atlanta, GA 30303 (404) 562-9424
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**REASON FOR INSPECTION**  
 The purpose of inspection by the duly designated representative of the Administrator is to gather data to determine if the person, or person in charge of such, subject to the underground injection control program has acted or is acting in compliance with Section 1445 of the SDWA 42 U.S.C. §300J-4(b). See reverse for quotes of Section 1445 of the SDWA 42 U.S.C. §300J-4(b)(1) and §300J-4(c).

OPERATOR	Black River Oil	EPA ID NUMBER	1530078
CONTACT NAME		LEASE NAME / WELL #	Spurlock 1
ADDRESS		EPA PERMIT NUMBER	KY10458
		STATE PERMIT NUMBER	53522
PHONE NUMBER		DOW NUMBER	N/A

**INFORMATION ON TANK** | NONE

**WELL LOCATION**

STATE	Ky.	LATITUDE N	37.72401
COUNTY	Magoffin	LONGITUDE W	83.06339
		ELEVATION GPS	877

**WELL COMPLETION**

CLASS WELL	(2) 5	CASING INJECTOR	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	TUBING & PACKER	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CASING SIZE	4 1/2	TUBING SIZE	2 3/8
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**OPERATIONAL DATA**

AC	SI	TA	AB	PA	CP	UC	NC	DE	AN	UK	
INJECTED FLUID	NONE	TUBING PSI	0	ANNULUS PSI	0	PUMP PSI	0	OPEN ANNULUS	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	ANNULUS FLUID	N/A

**GENERAL SURFACE CONDITION OF WELL SITE:** O.K.

**ADVERSE FINDINGS / PROBLEMS / INCIDENTS ENCOUNTERED/WHO NOTIFIED? DESCRIBE:**  
 Well set to flow back into Tank

**PERSONS ENCOUNTERED:**

NAME:	CONTACT INFO:	PHONE:	EMAIL:
NAME:	CONTACT INFO:	PHONE:	EMAIL:
NAME:	CONTACT INFO:	PHONE:	EMAIL:

**PHOTO #1 INJECTION WELL / FOCUS OR REFERNECE WELL) : DESCRIPTION**

**PHOTO #2 (TANK BATTERY), DESCRIPTION:** | Tank is rusted out | **GPS LOCATION:** at well

**PHOTO #3 DESCRIPTION** | **GPS LOCATION**

**PHOTO #4 DESCRIPTION** | **GPS LOCATION**

**ADDITIONAL PHOTOS WITH DESCRIPTION AND GPS LOCATION:**

OPERATOR REPRESENTATIVE	UIC INSPECTOR (Polu Kai Services, LLC)
NAME	NAME
SIGNATURE	SIGNATURE C. W. [Signature]
ADDRESS	DATE
PHONE	2.19.14
DATE	



**Polu Kai Services, LLC**  
137 North Washington Street, Suite 301  
Falls Church, VA 22046  
VA (703) 533-0039  
KY (859) 771-5687

**ROUTINE  
INSPECTION  
NOTICE**

4-22-04 mlt on  
**U.S. EPA**  
Region IV  
61 Forsyth St. S.W.  
Atlanta, GA 30303  
(404) 562-9424

**REASON FOR INSPECTION**

The purpose of inspection by the duly designated representative of the Administrator is to gather data to determine if the person, or person in charge of such, subject to the underground injection control program has acted or is acting in compliance with Section 1445 of the SDWA 42 U.S.C. §300J-4(b)(1) and §300J-4(c).

OPERATOR	First South Energy	EPA ID NUMBER	1530078
CONTACT NAME		LEASE NAME / WELL #	M.J. Spurlock 1
ADDRESS		EPA PERMIT NUMBER	KYI0458
		STATE PERMIT NUMBER	53522
PHONE NUMBER	all numbers are disconnected	DOW NUMBER	1530011

**INFORMATION ON TANK**

**WELL LOCATION**

STATE	KY	LATITUDE N	37.72401
COUNTY	Megottin	LONGITUDE W -	83.06339
		ELEVATION GPS	866

**WELL COMPLETION**

CLASS WELL	2	CASING INJECTOR	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	TUBING & PACKER	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	CASING SIZE	4 1/2	TUBING SIZE	2 3/8
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**OPERATIONAL DATA**

AC	SI	TA	AB	PA	CP	UC	NC	DE	AN	UK	
INJECTED FLUID	Unknown	TUBING PSI	Some oil	ANNULUS PSI	yes gas	PUMP PSI	NO	OPEN ANNULUS	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	ANNULUS FLUID	gas

GENERAL SURFACE CONDITION OF WELL SITE: O.K. Valve open

**ADVERSE FINDINGS / PROBLEMS / INCIDENTS ENCOUNTERED/WHO NOTIFIED? DESCRIBE:**

(Low) oil pressure on Tubing 2 3/8 we think not being injected re-inspect +  
(High) Gas Vapor Pressure on annulus did meter  
Wired to electric Meter all switches on, Meter Reads 147 ✓

PERSONS ENCOUNTERED: Teddy flynt 349 6210 May be the new owner. Per landowner

NAME:	CONTACT INFO:	PHONE:	EMAIL:
	a lawyer		
NAME:	CONTACT INFO:	PHONE:	EMAIL:
NAME:	CONTACT INFO:	PHONE:	EMAIL:

**PHOTO #1 INJECTION WELL / FOCUS OR REFERENCE WELL): DESCRIPTION**

I also heard that David Walker is the owner

**PHOTO #2 (TANK BATTERY), DESCRIPTION: GPS LOCATION**

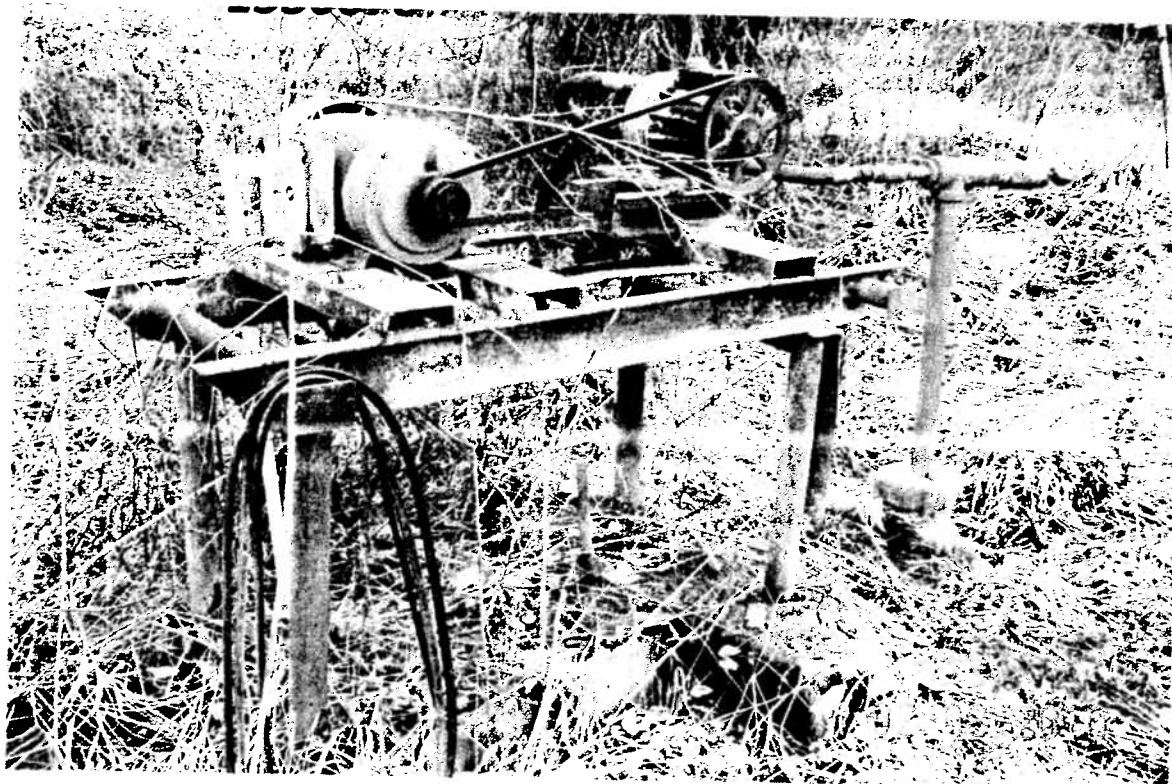
**PHOTO #3 DESCRIPTION Electric Meter GPS LOCATION**

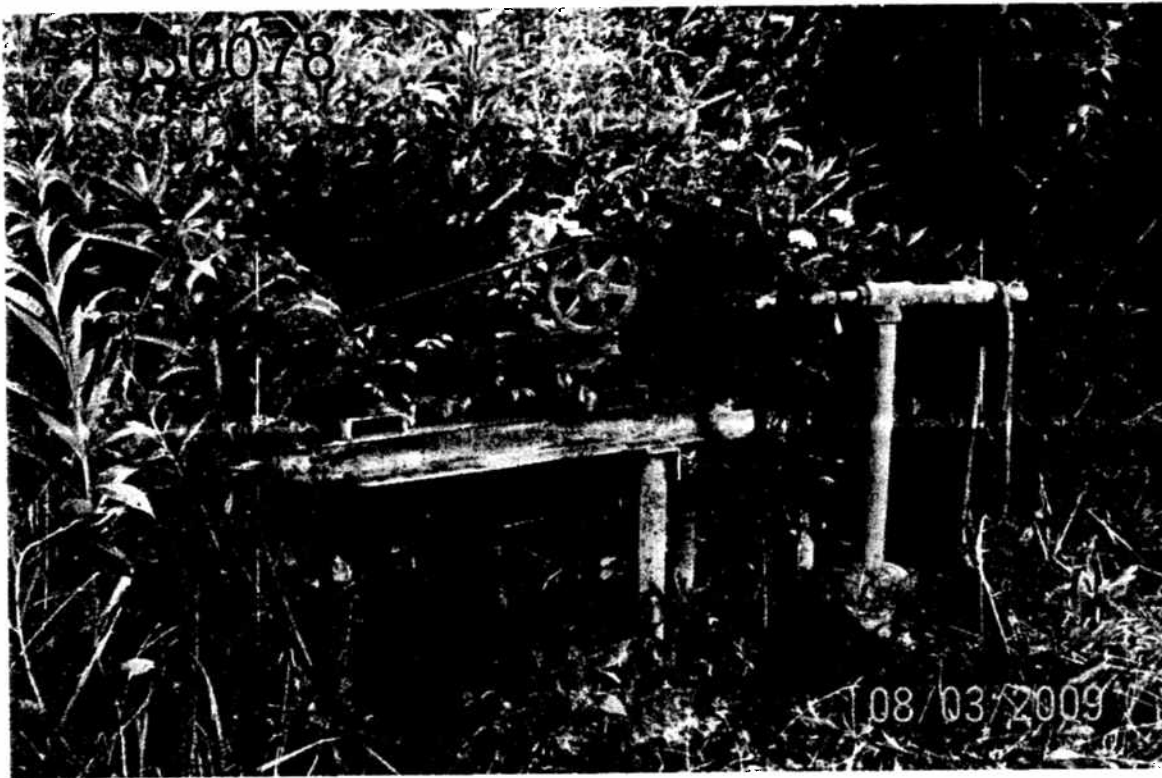
**PHOTO #4 DESCRIPTION Tank Sign GPS LOCATION**

**ADDITIONAL PHOTOS WITH DESCRIPTION AND GPS LOCATION:**

<b>OPERATOR REPRESENTATIVE</b>		<b>UIC INSPECTOR (Polu Kai Services, LLC)</b>	
NAME		NAME	
SIGNATURE		SIGNATURE	C. Walker
ADDRESS		DATE	2.8.10
PHONE			
DATE			







DEC 25 1990

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

Statement of Basis

for

U. S. EPA Underground Injection Control (UIC) Draft Permit Number KYI0458

for

First South Energy Corporation  
W239 N332 Pewaukee Road  
Waukesha, WI 53188

for

The conversion, operation, and plugging and abandonment of the  
M. J. Spurlock #1 located in:

Lakeville Field  
Magoffin County, Kentucky  
2680' FSL x 950' FWL of Carter Coordinate 7-0-78

On July 23, 1990, First South Energy Corporation submitted a UIC permit application and requested a permit for the conversion, operation, and plugging and abandonment of the above mentioned well. This application and its subsequent amendments have been reviewed by EPA Region IV staff and were deemed complete on September 28, 1990.

Under the authority of 40 C.F.R. Parts 144 and 146, EPA permits must specify conditions for construction, operation, monitoring, reporting, and plugging and abandonment of injection wells so as to prevent the movement of fluids into any underground source of drinking water (USDW). General provisions for EPA UIC permit requirements are found at 40 C.F.R. Parts 144 and 146, while regulations specific to Kentucky injection operations are found at 40 C.F.R. Part 147, Subpart S. In addition, permit conditions specific to this well are as follows.

Area of Review (AOR) and Corrective Action: In accordance with 40 C.F.R. §§144.55, 146.6 and 146.7, this is the area surrounding the well or project which the applicant must research, examine and develop a program to address, with a corrective action plan, wells which penetrate the injection zones that are improperly sealed, completed or abandoned and may therefore provide a conduit for fluid migration. The applicant has provided documentation on the well population within one-quarter mile of the injection well (i.e., AOR) indicating that all wells are properly cased and cemented and require no corrective action.

Underground Sources of Drinking Water: USDWs are defined by the UIC regulations as aquifers or portions thereof which contain less than 10,000 parts per millions of total dissolved solids and which are being or could be used as a source of drinking water. The lowermost possible USDW has been identified at approximately 675 feet below ground surface. The geologic name of this fresh water bearing formation is the Lee.

Injection and Confining Zones: Injection of fluids for enhanced recovery is limited by the permit to the Weir Sand in the perforated interval between 1146 and 1194 feet below ground surface. This injection zone is separated from the lowermost USDW by a confining zone known as the Waverly Shale with a thickness of approximately 340 feet and comprised of shale with no effective permeability or porosity.

Construction Requirements: The construction of the injection well meets the regulatory criteria of 40 C.F.R. §146.22 which requires that all new Class II wells be sited so that they inject into a formation (i.e., Weir Sand) which is separated from any USDW by a confining zone (i.e., Waverly Shale) free of known open faults or fractures within the AOR; and that all Class II wells be cased and cemented to prevent the movement of fluids into or between USDWs.

Injection Fluid: The injected fluid is limited to fluids brought to the surface in connection with conventional oil and natural gas production from the permittee's operations in the Lakeville Field. The expected maximum daily volume of fluid to be injected is 750 barrels.

Maximum Injection Pressure: Injection pressure shall not initiate fractures or propagate existing fractures in the injection zone. The maximum allowable wellhead injection pressure for the injection well will initially be established at 700 psig. If the permittee wishes to inject above 700 psig, it shall be proven through the use of a step-rate injectivity test, that such additional pressure will not fracture the injection zone. Upon approval by the Director, the permittee may inject at the maximum pressure attained during any step-rate test conducted on the injection well authorized by this permit provided the test proves such pressure will not fracture or extend fractures in the injection zone.

Step-rate injectivity test procedures must be approved by the Director prior to conducting the test and the test may be witnessed by EPA or an agent designated by EPA.

Monitoring and Reporting Requirements: In accordance with 40 C.F.R. §§144.54 and 146.23, the applicant will be responsible for monitoring injection pressure, annulus pressure, flow rate, and cumulative volume on a weekly basis and reporting monitoring results to EPA on an annual basis. The applicant is also required to conduct and pass a two-part mechanical integrity test (MIT), in accordance with 40 C.F.R. §146.8, once after the well is complete and once every five years thereafter. These tests will provide EPA with an evaluation of the integrity of the tubular goods (casing, tubing, and packer) as well as documentation as to the absence of fluid movement behind the cemented casing.

Plugging and Abandonment: In accordance with 40 C.F.R. §§146.10 and 146.24(d), the permit includes a plugging and abandonment plan that will result in environmentally protective well closure at the time of cessation of operations. The applicant has also made a demonstration of financial responsibility, in accordance with 40 C.F.R. §§144.52(a) and 146.24(a), which indicates that adequate resources will be available for well closure and will preclude the possibility of abandonment without proper plugging.

Expiration Date: In accordance with 40 C.F.R. §144.36, the permit will be in effect for the life of the well or project, unless it is otherwise modified, revoked and reissued, or terminated as provided at 40 C.F.R. §§144.39, 144.40 and 144.41. The permit will be reviewed by EPA at least once every five (5) years from the effective date for consistency with federal regulations.

Additional Information: Questions, comments and requests for additional information or for a public hearing may be directed to the contact person listed below. The public comment period on this permitting action will close thirty (30) days after the date of the public notice. If EPA receives written comments of substantial public interest concerning a hearing on this action, a public notice of this hearing will be published locally and mailed to interested parties.

Nancy H. Marsh  
U. S. EPA, Region IV  
Water Management Division  
Ground-Water Protection Branch  
Underground Injection Control Section  
345 Courtland Street, NE  
Atlanta, Georgia 30365



2670 New Paintsville Rd  
Salysville Ky 41465

# MECHANICAL INTEGRITY TEST INSPECTION FORM

U.S. Environmental Protection Agency, EPA

Office of Inspector General, OIG

Field Office, Office of Surface Water, EPA Region 4, Cincinnati, OH

Kenneth L. Gumble, President

Handwritten  
Exp. 1/20

Company Name: Black River Oil, Inc. Contact Person: Ken Gumble  
Address: HC 61 Box 160 City: Salysville State: Ky  
Zip: 41465 Phone Number: 606 424 9418

## WELL DESCRIPTION/LOCATION

EPA ID No: KYS1530078 EPA Permit No: KYI0458 Rule Authority: Y/N  
Lease Name: MI Spurlock Well No: 1 State Permit No: \_\_\_\_\_  
DOW Tank Battery Registration No: \_\_\_\_\_ Name on Tank Battery: \_\_\_\_\_  
GPS Longitude: W83.06344° GPS Latitude: N37.72400°  
Carter Coordinates: 7 0 78 ENL/ST: 2680 (FT) FEL/ST: 950 (FT)

## WELL COMPLETION

Class II: <input checked="" type="checkbox"/> V: _____	TOTAL DEPTH: <u>1260</u> (FT)	SURFACE ELEVATION: _____ (FT)
--	-------------------------------	-------------------------------

Injection Type: Gravity \_\_\_\_\_ Pump ☒ casing injector? Y/N tubing & packer? ☒

CASING STRING	CASING DIAMETER	CEMENT SHOE DEPTH	CEMENT VOLUME (SACKS/TYPE)	TOP OF CEMENT
SURFACE				
INTERMEDIATE				
PRODUCTION	<u>4 1/2"</u>			
TUBING	<u>2 3/8"</u>			

Concrete  
6.23.99

TOP OF CEMENT CALCULATED FROM: RECORDS \_\_\_\_\_ CEMENT BOND LOG \_\_\_\_\_ REMEDIAL \_\_\_\_\_

PACKER TYPE		INJECTION FORMATION	
PACKER DEPTH		FORMATION NAME	
PERFORATIONS		TOP ELEVATION	

## OPERATIONAL DATA

WELL STATUS: Reactivating [Active (AC), Temporarily abandoned (TA), Shut In (SI), Plugged & Abandoned (PA), Abandoned (AB), Plugged and abandoned without EPA approval (AN), Under Construction (UC), Not Constructed (NC), Converted to Production (CP)]

Connected? ☒ Injecting? ☒

Injected Fluid: freshwater? \_\_\_\_\_ salt water? \_\_\_\_\_ combination? \_\_\_\_\_ annular fluid? \_\_\_\_\_

Injection rate (bbl/day): \_\_\_\_\_ Injection Pressure (psi): \_\_\_\_\_ Is annulus open? Y/N

tubing PSI: \_\_\_\_\_ annulus PSI: \_\_\_\_\_ pump PSI: \_\_\_\_\_



## ANNULAR PRESSURE TEST:

INITIAL TEST PRESSURE (PSI)	FINAL TEST PRESSURE (PSI)	PRESSURE CHANGE (PSI)	LENGTH OF TEST
303	301	-2	30 minutes

Comments Findings:

D/P Sr

RECEIPT OF THIS NOTICE IS HEREBY ACKNOWLEDGED:

## SIGNATURES

Operator Representative:

Russell Libor

SEI Inspector:

3/ [Signature]

INSPECTION DATE:

12/4/13

KYS1530078